

## ABSTRACT

The membrane electrode assembly of the present invention for the proton-exchange membrane fuel cell includes a polymer electrolyte membrane and an electrode catalyst layer, wherein at least a part of the polymer electrolyte membrane infiltrates into the electrode catalyst layer, and wherein the polymer electrolyte membrane is formed by polymerizing a composition containing at least a compound having proton conductivity and a compound having activity to an active energy ray, or a composition containing at least a compound having proton conductivity and activity to the active energy ray. The object of the present invention is to provide a membrane electrolyte assembly for realizing a high-output proton-exchange membrane fuel cell by improving a bonding state between the polymer electrolyte membrane and the electrode catalyst layer to reduce an internal resistance, and by providing a three-dimensional three-phase interface to increase reaction areas.